VIROLOGY

Volume 242, 1998

Academic Press

Copyright © 1998 by Academic Press

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the Publisher. *Exceptions:* It is the policy of Academic Press that authors need not obtain permission in the following cases only: (1) to use their original figures or tables in their future works; (2) to make copies of their papers for use in their classroom teaching; and (3) to include their papers as part of their dissertations.

The appearance of the code at the bottom of the first page of an article in this journal indicates the Publisher's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (222 Rosewood Drive, Danvers, Massachusetts 01923), for copying beyond that permitted by Sections 107 or 108 of the U. S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1998 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

0042-6822/98 $25.00

MADE IN THE UNITED STATES OF AMERICA

This journal is printed on acid-free paper.

Contents of Volume 242

Number 1, March 1, 1998

Virus Replication/Gene Expression

Functional Significance of Three Basic N-Terminal Amino Acids of Alfalfa Mosaic Virus Coat Protein — Vidadi Yusibov and L. Sue Loesch-Fries 1

Distinct Regions of EBV DNase Are Required for Nuclease and DNA Binding Activities — Ming-Tsan Liu, Tsuey-Ying Hsu, Su-Fang Lin, See-Voon Seow, Mei-Ying Liu, Jen-Yang Chen, and Czau-Siung Yang 6

Maize Chlorotic Mottle Machlomovirus and Wheat Streak Mosaic Rymovirus Concentrations Increase in the Synergistic Disease Corn Lethal Necrosis — Kay Scheets 28

Phosphorylation of DHBV Pre-S: Identification of the Major Site of Phosphorylation and Effects of Mutations on the Virus Life Cycle — Christelle Borel, Claire Sunyach, Olivier Hantz, Christian Trepo, and Alan Kay 90

The Specificity of Rabies Virus RNA Encapsidation by Nucleoprotein — Jun Yang, D. Craig Hooper, William H. Wunner, Hilary Koprowski, Bernhard Dietzschold, and Zhen Fang Fu 107

DNA Requirements *in Vivo* for Phage T4 Packaging — Hsingchi Lin and Lindsay W. Black 118

The Herpes Simplex Virus Immediate-Early Protein ICP27 Shuttles between Nucleus and Cytoplasm — Wendy E. Mears and Stephen A. Rice 128

SR Protein and snRNP Requirements for Assembly of the Rous Sarcoma Virus Negative Regulator of Splicing Complex *in Vitro* — Craig R. Cook and Mark T. McNally 211

Virus Structure and Assembly

Capsids Are Formed in a Mutant Virus Blocked at the Maturation Site of the UL26 and UL26.5 Open Reading Frames of Herpes Simplex Virus Type 1 but Are Not Formed in a Null Mutant of UL38 (VP19C) — Stanley Person and Prashant Desai 193

Virus–Cell Biology

Mutations in a Carboxy-Terminal Region of Vesicular Stomatitis Virus Glycoprotein G That Affect Membrane Fusion Activity — Shahira Shokralla, Yun He, Essam Wanas, and Hara P. Ghosh 39

Apoptosis Induced by a Postbinding Step of Vaccinia Virus Entry into Chinese Hamster Ovary Cells — Anna Ramsey-Ewing and Bernard Moss 138

Viral Pathogenesis and Immunity

The Antiviral Action of Interferon Is Potentiated by Removal of the Conserved IRTAM Domain of the IFNAR1 Chain of the Interferon α/β Receptor: Effects on JAK-STAT Activation and Receptor Down-regulation — Leela Basu, Chuan-He Yang, Aruna Murti, J. Victor Garcia, Ed Croze, Stefan N. Constantinescu, Jerald E. Mullersman, and Lawrence M. Pfeffer 14

Studies on the Movement of Cowpea Mosaic Virus Using the Jellyfish Green Fluorescent Protein — Jan Verver, Joan Wellink, Jan Van Lent, Kodetham Gopinath, and Ab Van Kammen 22

Chemokine Homolog of Molluscum Contagiosum Virus: Sequence Conservation and Expression — Joachim J. Bugert, Claudia Lohmüller, Inger Damon, Bernard Moss, and Gholamreza Darai 51

Differential Behavior of the Mo+PyF101 Enhancer Variant of Moloney Murine Leukemia Virus in Rats and Mice — B. Kay Brightman, Michael Okimoto, Vaishali Kulkarni, Jeffrey K. Lander, and Hung Fan 60

An Equine Herpesvirus Type 1 Recombinant with a Deletion in the gE and gI Genes Is Avirulent in Young Horses — Tomio Matsumura, Takashi Kondo, Shigeo Sugita, Armando M. Damiani, Dennis J. O'Callaghan, and Hiroshi Imagawa 68

Genetic Reassortment among Viruses Causing Hantavirus Pulmonary Syndrome — Luis L. Rodriguez, Jessica H. Owens, Clarence J. Peters, and Stuart T. Nichol 99

A Minimally Replicative HIV-2 Live-Virus Vaccine Protects *M. nemestrina* from Disease after HIV-2_{287} Challenge — David J. Looney, Jan McClure, Stephen J. Kent, Antonia Radaelli, Günter Kraus, Ann Schmidt, Kevin Steffy, Phillip Greenberg, Shiu-Lok Hu, William R. Morton, and Flossie Wong-Staal 150

Importance of the Herpes Simplex Virus *UL24* Gene for Productive Ganglionic Infection in Mice — Jennie G. Jacobson, Shun-Hua Chen, W. James Cook, Martha F. Kramer, and Donald M. Coen 161

Expression of Hemagglutinin/Esterase by a Mouse Hepatitis Virus Coronavirus Defective–Interfering RNA Alters Viral Pathogenesis — Xuming Zhang, David R. Hinton, Sungmin Park, Beatriz Parra, Ching-Len Liao, Michael M. C. Lai, and Stephen A. Stohlman 170

Increased Ratio of *bcl-2/bax* Expression Is Associated with Bovine Leukemia Virus-Induced Leukemogenesis in Cattle — R. A. Reyes and G. L. Cockerell 184

Amino Acid Changes in the Coat Protein of Cucumber Mosaic Virus Differentially Affect Transmission by the Aphids *Myzus persicae* and *Aphis gossypii* — Keith L. Perry, Lee Zhang, and Peter Palukaitis . . . 204

The Region of the Herpes Simplex Virus Type 1 LAT Gene Involved in Spontaneous Reactivation Does Not Encode a Functional Protein — B. S. Drolet, G. C. Perng, J. Cohen, S. M. Slanina, A. Yukht, A. B. Nesburn, and S. L. Wechsler . . . 221

Inhibition of HIV-1 Replication by a Monoclonal Antibody Directed toward the Complementarity Determining Region 3-Like Domain of CD4 in CD45 Expressing and CD45-Deficient Cells — Annick Péléraux, Jean-François Peyron, and Christian Devaux 233

Emerging Viruses/Unconventional Agents

Novel Structures of Two Virus-like RNA Elements from a Diseased Isolate of the Dutch Elm Disease Fungus, *Ophiostoma novo-ulmi* — Yiguo Hong, Thomas E. Cole, Clive M. Brasier, and Kenneth W. Buck 80

Author Index for Volume 242, Number 1 238

Number 2, March 15, 1998

Virus Replication/Gene Expression

Characterization of the Small Subunit of the Terminase Enzyme of the *Bacillus subtilis* Bacteriophage SPP1 — Aranzazu Gual and Juan C. Alonso 279

Processing of the Coronavirus MHV-JHM Polymerase Polyprotein: Identification of Precursors and Proteolytic Products Spanning 400 Kilodaltons of ORF1a — Jennifer J. Schiller, Amornrat Kanjanahaluethai, and Susan C. Baker 288

Multiple *Cis* Elements Contribute to Geminivirus Origin Function — Beverly M. Orozco, Heather J. Gladfelter, Sharon B. Settlage, Patricia A. Eagle, Renee N. Gentry, and Linda Hanley-Bowdoin 346

The Human Papillomavirus Type 18 (HPV18) Replication Protein E1 Is a Transcriptional Activator When Interacting with HPV18 E2 — Caroline Demeret, Sylvain Goyat, Moshe Yaniv, and Françoise Thierry 378

Characterization of the Brome Mosaic Virus Movement Protein Expressed in *E. coli* — Kitty A. J. Jansen, Cor J. A. M. Wolfs, Hendrikus Lohuis, Rob W. Goldbach, and Benedictus J. M. Verduin 387

Mapping Regions of the Cauliflower Mosaic Virus ORF III Product Required for Infectivity — Emmanuel Jacquot, Angèle Geldreich, Mario Keller, and Pierre Yot 395

Nonlinear Ribosome Migration on Cauliflower Mosaic Virus 35S RNA in Transgenic Tobacco Plants — Nania Schärer-Hernández and Thomas Hohn 403

Topoisomerase I Stimulates SV40 T Antigen-Mediated DNA Replication and Inhibits T Antigen's Ability to Unwind DNA at Nonorigin Sites — Daniel T. Simmons, Pamela W. Trowbridge, and Rupa Roy 435

Virus Structure and Assembly

Assembly of Viroplasm and Virus-like Particles of Rotavirus by a Semliki Forest Virus Replicon — Mikael Nilsson, Carl-Henrik von Bonsdorff, Katharzyna Weclewicz, Jean Cohen, and Lennart Svensson 255

A Vibriophage, KVP40, with Major Capsid Protein Homologous to gp23* of Coliphage T4 — Shigenobu Matsuzaki, Tetsuyoshi Inoue, and Shuji Tanaka 314

Group I Introns Found in *Chlorella* Viruses: Biological Implications — Kensho Nishida, Satoshi Suzuki, Yoshiki Kimura, Nobuhiko Nomura, Makoto Fujie, and Takashi Yamada 319

Virus–Cell Biology

Nucleolar Localization of Mouse Mammary Tumor Virus Proteins in T-Cell Lymphomas — Hagit Hoch-Marchaim, Tsuri Hasson, Efrat Rorman, Shulamit Cohen, and Jacob Hochman 246

Intracellular Retention of Duck Hepatitis B Virus Large Surface Protein Is Independent of preS Topology — Elena V. Gazina, Bo Lin, Andrea Gallina, Gabriele Milanesi, and David A. Anderson 266

Intracellular Location of Two Groundnut Rosette Umbravirus Proteins Delivered by PVX and TMV Vectors — E. V. Ryabov, K. J. Oparka, S. Santa Cruz, D. J. Robinson, and M. E. Taliansky 303

Role of gp41 Glycosylation Sites in the Biological Activity of Human Immunodeficiency Virus Type 1 Envelope Glycoprotein — Claire Perrin, Emmanuel Fenouillet, and Ian M. Jones 338

The Host Range and Interference Properties of Two Closely Related Feline Leukemia Variants Suggest That They Use Distinct Receptors — Maria Moser, Cara Carthel Burns, Sarah Boomer, and Julie Overbaugh 366

Arginine Residues in the C-terminus of HIV-1 Vpr Are Important for Nuclear Localization and Cell Cycle Arrest — Yi Zhou, Yuhling Lu, and Lee Ratner 414

Viral Pathogenesis and Immunity

The Neutralization Epitope of Lactate Dehydrogenase-Elevating Virus Is Located on the Short Ectodomain of the Primary Envelope Glycoprotein — Kehan Li, Zongyu Chen, and Peter Plagemann . . . 239

Sendai Viruses with Altered P, V, and W Protein Expression — Christophe Delenda, Geraldine Taylor, Stéphane Hausmann, Dominique Garcin, and Daniel Kolakofsky 327

4 32HI XL 3782

Suppression of Rat Bone Marrow Cells by Friend Murine Leukemia Virus Envelope Proteins — Stefan Mazgareanu, Justus G. Müller, Stefanie Czub, Simone Schimmer, Martin Bredt, and Markus Czub 357

Molecular Epidemiology of HTLV-II among United States Blood Donors and Intravenous Drug Users: An Age–Cohort Effect for HTLV-II RFLP Type a0 — Edward L. Murphy, Renaud Mahieux, Guy de Thé, Fredj Tekaia, Dannie Ameti, Jacqueline Horton, and Antoine Gessain 425

Author Index for Volume 242 444